

Applicant : Christoph Brabec et al.
Serial No. : 10/561,582
Filed : March 7, 2006
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Attorney's Docket No.: 21928-019US1 / SA-18

Amendments to the Drawings:

The attached replacement sheet of drawings includes changes to Fig. 1 and replaces the original sheet including Fig. 1.

In Figure 1, amended the figure to replace text that was initially filed in German with text in English. Applicants also deleted a legend that was deemed redundant.

Attachments following last page of this Amendment:

Replacement Sheet (1 page)
Annotated Sheet Showing Change(s) (1 page)

REMARKS

In response to the Office Action of May 29, 2007, Applicants amended claims 1-5 and 8, and cancelled claims 13-17. Claims 1-12 are presented for examination.

The Examiner objected to the specification. Applicants hereby submit a clean copy and a marked-up copy of a substituted specification, so the objection should be withdrawn.

The Examiner objected to the figure. Applicants hereby submit a replacement drawing, so the objection should be withdrawn.

The Examiner objected to claims 4, 5, 8, and 17. Applicants have amended claims 4, 5, and 8 to obviate these objections, while claim 17 was cancelled. Applicants request that the Examiner withdraw these objections.

The Examiner rejected claims 1-5 under 35 U.S.C. §102(b) as being anticipated by C.J. Brabec et al., "The influence of materials work function on the open circuit voltage of plastic solar cells," Thin Solid Films, 403-404 (2002) 368-72 ("Brabec").¹ As amended, claims 1-5 cover methods that include applying a second organic semiconductor layer to a first organic semiconductor layer, where the second organic semiconductor is present in a solvent when applied to the first organic semiconductor layer, and the solvent is capable of partially dissolving the first organic semiconductor layer such that a portion of the first semiconductor mixes with a portion of the second semiconductor to form a bulk heterojunction mixed layer. Brabec does not disclose such methods. Rather, Brabec discloses methods of making a bulk heterojunction in which a polymer and acceptor are combined in a solution, and the solution is cast. (Brabec, p. 371.) Brabec also discloses methods of making a "bilayer diffusion" device (id., pp. 370-71), but Brabec's bilayer diffusion devices are different from bulk heterojunction devices. (See, e.g., id., p. 369 and Fig. 2.) Accordingly, Applicants request reconsideration and withdrawal of the rejection of claims 1-5.

The Examiner rejected claims 6-12 under 35 U.S.C. §102(b) as being anticipated by Brabec. As amended, claims 6-12 cover methods that include applying a solution that includes a second organic semiconductor and a solvent on a first layer, where the first layer includes a first

¹ Applicants do not concede that Brabec is prior art under 35 U.S.C. §102(b) to the pending claims.

organic semiconductor that is at least partially soluble in the solvent. The methods also include evaporating the solvent to form a second layer and a bulk heterojunction mixed layer between the first and second layers, where the second layer includes the second organic semiconductor and the bulk heterojunction mixed layer includes a mixture of the first and second organic semiconductors. Brabec does not disclose such methods, so Applicants request reconsideration and withdrawal of this rejection.

The Examiner rejected claims 13-17 under 35 U.S.C. §102(b) as being anticipated by Brabec. Applicants cancelled these claims, so the rejection should be withdrawn.

Applicants believe the application is in condition for allowance and request such action.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: _____

August 23, 2007



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